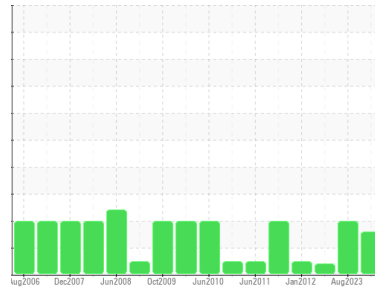




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**KAESER BSD-40 2048663 (S/N 1089)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) M-460 (--- GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of particulates present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>KCPA016350</b>  | KCPA002832  | KCP35222    |
| Sample Date   | Client Info |             | <b>02 Apr 2024</b> | 23 Aug 2023 | 28 Feb 2022 |
| Machine Age   | hrs         | Client Info | <b>96045</b>       | 93588       | 85343       |
| Oil Age       | hrs         | Client Info | <b>5500</b>        | 0           | 0           |
| Oil Changed   | Client Info |             | <b>Changed</b>     | N/A         | Not Changd  |
| Sample Status |             |             | <b>ABNORMAL</b>    | ABNORMAL    | ABNORMAL    |

## WEAR METALS

|          | method | limit/base      | current      | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >50 | <b>0</b>     | 1        | 0        |
| Chromium | ppm    | ASTM D5185m >10 | <b>&lt;1</b> | 0        | 0        |
| Nickel   | ppm    | ASTM D5185m     | <b>0</b>     | <1       | 0        |
| Titanium | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |
| Silver   | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >25 | <b>0</b>     | <1       | <1       |
| Lead     | ppm    | ASTM D5185m >25 | <b>0</b>     | 0        | 0        |
| Copper   | ppm    | ASTM D5185m >50 | <b>6</b>     | 3        | <1       |
| Tin      | ppm    | ASTM D5185m >15 | <b>&lt;1</b> | 0        | 0        |
| Antimony | ppm    | ASTM D5185m     | <b>---</b>   | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |

## ADDITIVES

|            | method | limit/base        | current      | history1 | history2 |
|------------|--------|-------------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 0     | <b>0</b>     | 0        | 0        |
| Barium     | ppm    | ASTM D5185m 90    | <b>&lt;1</b> | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m 0     | <b>0</b>     | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m       | <b>0</b>     | 0        | 0        |
| Magnesium  | ppm    | ASTM D5185m 100   | <b>10</b>    | 27       | 0        |
| Calcium    | ppm    | ASTM D5185m 0     | <b>0</b>     | 2        | 0        |
| Phosphorus | ppm    | ASTM D5185m 0     | <b>14</b>    | 6        | 126      |
| Zinc       | ppm    | ASTM D5185m 0     | <b>0</b>     | 5        | 0        |
| Sulfur     | ppm    | ASTM D5185m 23500 | <b>19704</b> | 20858    | 579      |

## CONTAMINANTS

|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25  | <b>7</b>     | 9        | 3        |
| Sodium    | ppm    | ASTM D5185m      | <b>8</b>     | 11       | 0        |
| Potassium | ppm    | ASTM D5185m >20  | <b>0</b>     | <1       | 0        |
| Water     | %      | ASTM D6304 >0.1  | <b>0.005</b> | 0.010    | 0.003    |
| ppm Water | ppm    | ASTM D6304 >1000 | <b>54</b>    | 105.6    | 25.7     |

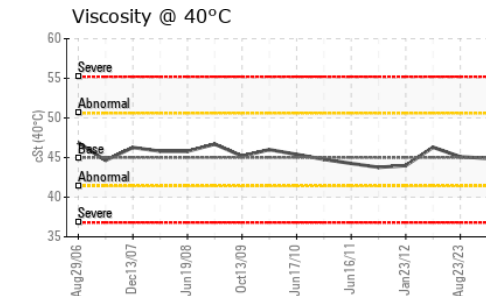
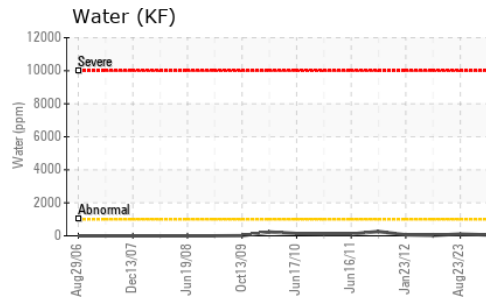
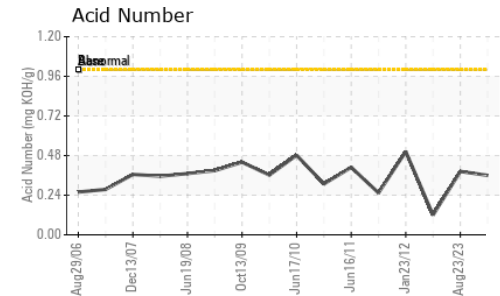
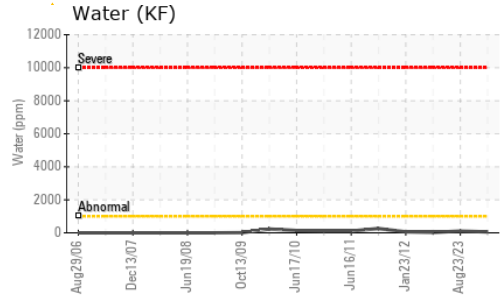
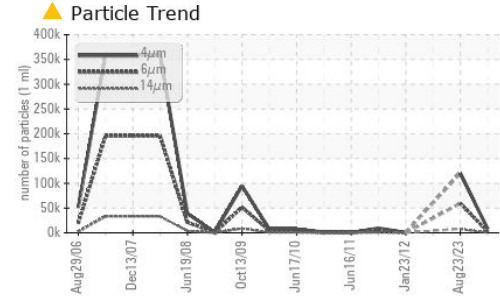
## FLUID CLEANLINESS

|                 | method       | limit/base | current           | history1   | history2 |
|-----------------|--------------|------------|-------------------|------------|----------|
| Particles >4µm  | ASTM D7647   |            | <b>8186</b>       | 120346     | ---      |
| Particles >6µm  | ASTM D7647   | >1300      | <b>▲ 2582</b>     | ▲ 59537    | ---      |
| Particles >14µm | ASTM D7647   | >80        | <b>▲ 151</b>      | ▲ 7723     | ---      |
| Particles >21µm | ASTM D7647   | >20        | <b>▲ 26</b>       | ▲ 1457     | ---      |
| Particles >38µm | ASTM D7647   | >4         | <b>1</b>          | ▲ 14       | ---      |
| Particles >71µm | ASTM D7647   | >3         | <b>0</b>          | 0          | ---      |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13  | <b>▲ 20/19/14</b> | ▲ 24/23/20 | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base     | current     | history1 | history2 |
|------------------|----------|----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 1.0 | <b>0.36</b> | 0.384    | 0.12     |

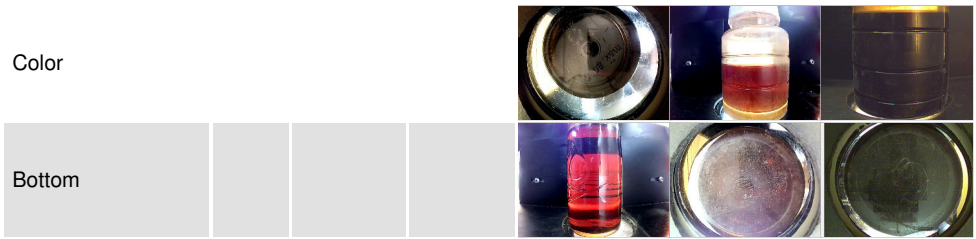
# OIL ANALYSIS REPORT



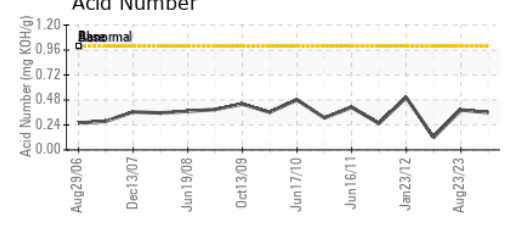
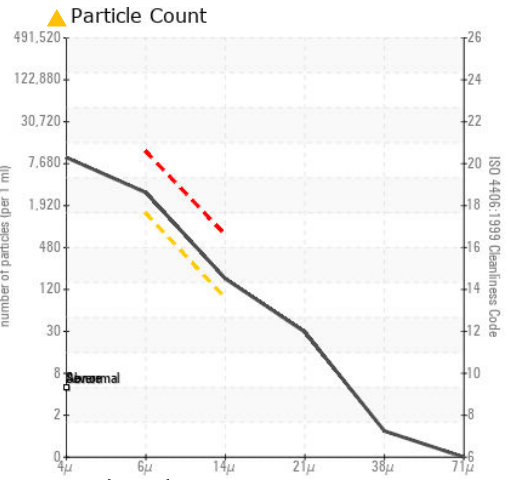
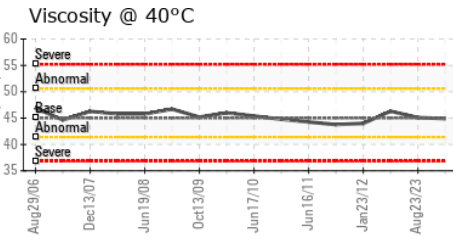
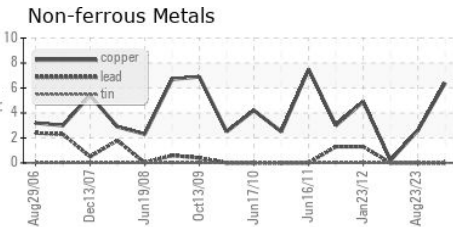
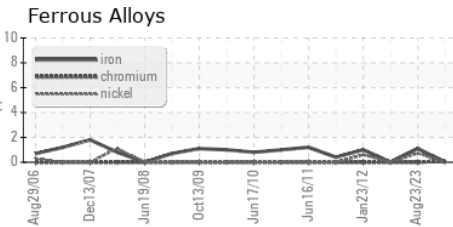
| PARAMETER        | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual    | NONE    | NONE     | ▲ MODER  |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | NONE     |
| Appearance       | scalar | *Visual    | NORML   | NORML    | NORML    |
| Odor             | scalar | *Visual    | NORML   | NORML    | NORML    |
| Emulsified Water | scalar | *Visual    | >0.1    | NEG      | NEG      |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 45      | 44.9     | 45.1     |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA016350 **Received** : 09 Apr 2024  
**Lab Number** : 06143707 **Tested** : 10 Apr 2024  
**Unique Number** : 10968515 **Diagnosed** : 12 Apr 2024 - Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**BASALITE**  
 605 INDUSTRIAL WAY  
 DIXON, CA  
 US 95620  
 Contact: DAN YOUNG  
 dan.young@basalite.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)